



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-1103; Directorate Identifier 2012-NM-131-AD; Amendment 39-17842; AD 2014-09-07]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes. This AD was prompted by reports of cracking of the forward bulkhead web, web stiffeners, attachment angles, and thermal anti-ice (TAI) spray ring assemblies of the engine air intake cowl. This AD requires replacing the forward bulkhead assembly, TAI spray ring assembly, and attachment fittings of the air intake cowl. We are issuing this AD to prevent the failure of air intake cowl components due to cracking, which could result in the air intake cowl separating from the engine and striking critical airplane control surfaces that could result in a loss of airplane control; severe engine damage and loss of thrust; or large parts striking a person or property on the ground.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For Rolls-Royce service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; telephone 011 44 1332 242424; fax 011 44 1332 249936; email http://www.rolls-royce.com/contact/civil_team.jsp; Internet <https://www.aeromanager.com>. For Bombardier service information identified in this AD, contact Short Brothers PLC, Airworthiness, P.O. Box 241, Airport Road, Belfast, BT3 9DZ Northern Ireland; telephone +44(0)2890-462469; fax +44(0)2890-468444; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1103; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kevin Nguyen, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6501; fax: (425) 917-6590; email: kevin.nguyen@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes. The NPRM published in the Federal Register on October 19, 2012 (77 FR 64242). The NPRM was prompted by reports of cracking of the forward bulkhead web, web stiffeners, attachment angles, and thermal anti-ice (TAI) spray ring assemblies of the engine air intake cowl. The NPRM proposed to require replacing the forward bulkhead assembly, TAI spray ring assembly, and attachment fittings of the air intake cowl. We are issuing this AD to prevent the failure of air intake cowl components due to cracking, which could result in the air intake cowl separating from the engine and striking critical airplane control surfaces that could result in a loss of airplane control; severe engine damage and loss of thrust; or large parts striking a person or property on the ground.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (77 FR 64242, October 19, 2012) and the FAA's response to each comment.

Requests to Delay Final Rule Pending Modification as Terminating Action

FedEx, American Airlines (AAL), and United Airlines (UAL) requested that we delay issuance of this final rule until the manufacturer can release service information that contains instructions for a modification as terminating action for the repetitive replacements proposed in the NPRM (77 FR 69242, October 19, 2012). In lieu of that, FedEx and AAL requested we include a modification as terminating action. FedEx and AAL stated that it would be more beneficial to accomplish the terminating modification rather than doing the

interim replacements of the air intake cowl bulkhead assemblies or parts. UAL noted that airlines are working with Boeing to obtain improvements to the current design, which includes a three-part solution to most structural design deficiencies.

FedEx explained that Rolls-Royce was scheduled to release service information including a terminating modification for the repetitive replacements during the first quarter of 2013. UAL stated repetitive replacement of the forward bulkhead is expensive and does not solve the inherent design problem.

We partially agree. We agree that a terminating modification, if available, should be included as part of this final rule, because eliminating the in-service safety issue is a preferred choice over repetitive replacement of assemblies or parts.

However, we disagree with delaying issuance of this final rule until service information containing procedures for a terminating modification becomes available. We have not received an exact date for release of the planned Rolls-Royce service information. We have determined that to delay this final rule would be inappropriate, since we have determined that such a delay would not adequately address the unsafe condition in a timely manner and that replacing the forward bulkhead assembly components must be done to ensure continued safety. When the terminating modification becomes available, we might consider additional rulemaking. Operators may apply for approval of an alternative method of compliance (AMOC) for these actions in accordance with the provisions of paragraph (l) of this AD. We have not changed this final rule in this regard.

Request to Reference Latest Service Information and Allow Credit

Rolls-Royce Group PLC (Rolls-Royce) requested that we refer to the latest service information: Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, Revision 1, dated September 28, 2012, which was issued to correct minor typographical errors. Rolls-Royce also requested that we allow credit

for actions done previously using Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, dated October 14, 2011.

We agree to reference the latest service information and to allow credit for using certain previous revisions. We have updated paragraphs (g) and (h) of this final rule to reference Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013, which corrects a certain air intake cowl serial number; and to reference Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014, which corrects certain part numbers. We also have revised paragraph (i) of this final rule to allow credit for certain actions done before the effective date of this AD using Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, dated October 14, 2011; or Revision 1, dated September 28, 2012. We also have revised paragraph (i) of this final rule to allow credit for certain actions done before the effective date of this AD using Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 1, dated August 15, 2012; and Revision 2, dated December 5, 2012.

Requests to Delay Final Rule Until Service Information is Corrected

FedEx requested that this final rule be delayed until a part number in certain service information is corrected. FedEx stated that Appendix 3 of Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, dated October 14, 2011, called out part number LJ35477 for both “Angle ATT FWD Outer” and “Angle Attachment FWD Outer.” However, the correct part number for the latter part is LJ35478.

We do not agree to delay issuance of this final rule. However, we note that the part number error has already been corrected in Appendix 3 of Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, Revision 1, dated September 28, 2012; and Revision 2, dated June 20, 2013. We have updated

paragraphs (g), (h), (j), and (k) of this final rule to reference Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013; and Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014; as the appropriate sources of service information for removing and replacing, with new parts, the forward bulkhead assembly, TAI spray ring assembly, and attachment fittings of the air intake cowl. Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014, also includes corrected part number information: Part number LJ35479, with quantity two, was corrected to LJ50537 and LJ50538, with one quantity each; part number LJ35482 was corrected to LJ50535; and part number LJ35483 was corrected to LJ50536.

AAL and FedEx requested that certain service information be updated to allow the use of alternative rivets (fasteners) in place of obsolete “MS20426DD” fasteners. The commenters stated that service information should include suitable alternatives; however, the commenters did not propose suitable alternative fastener information.

We have confirmed with the parts manufacturer that the subject rivets (fasteners) are not obsolete, as indicated by the commenters. In addition, while we agree that it would be beneficial if the service information were to include acceptable alternative fastener information, in light of the urgency of the identified unsafe condition, we do not find it appropriate to delay this final rule to wait for additional revised service information. We included paragraph (l) in this final rule to provide operators a means to request approval of the use of an alternative fastener if sufficient data are presented that demonstrate the rivet (fastener) is a suitable alternative. We have not changed this final rule in this regard.

Request to Issue Component AD Instead of Airplane AD

FedEx requested that the applicability in paragraph (c) of the NPRM (77 FR 69242, October 19, 2012) be revised to reference component part numbers and serial numbers, rather than specific airplanes. FedEx stated that the NPRM should apply to components rather than airplanes because the applicability of the NPRM, as written, will create confusion and will inhibit operator AD tracking capabilities.

We disagree with the commenter's request. According to FAA policy, if an unsafe condition results from the installation of a particular component in only one particular make and model of airplane, the AD would apply to the airplane model, not the component. The reason for this is simple: If the AD applies to the airplane model equipped with the item, operators of those airplanes will be notified directly of the unsafe condition and the action required to correct it. While we assume that operators can identify the airplane models they operate, they may not be aware of specific items installed on the airplanes. Therefore, specifying the airplane models in the applicability as the subject of the AD prevents an operator's "unknowing failure to comply" with the AD. In this case, the air intake cowls of the affected design with the identified unsafe condition are known to be confined to Model 757 airplanes; therefore, it is appropriate for the FAA to issue an airplane AD, not a component AD. We have not changed this final rule in this regard.

Request to Clarify Applicability Regarding Pratt & Whitney Engines

US Airways requested the NPRM (77 FR 69242, October 19, 2012) be revised to clarify actions for airplanes equipped with Pratt & Whitney engines.

We clarify that the applicability statement in paragraph (c) of this final rule only identifies Boeing Model 757-200, -200PF, -200CB, and -300 series airplanes equipped with certain Rolls-Royce engines. This final rule does not apply to airplanes equipped with Pratt & Whitney engines. No change has been made to this final rule in this regard.

Request to Revise a Calendar-Based to a Cycle-Based Compliance Time

UPS requested that the compliance times in the NPRM (77 FR 69242, October 19, 2012) be revised from calendar-based to cycle-based time for the replacement requirement. UPS noted that the NPRM requires replacement of forward bulkhead assemblies of air intake cowls at calendar date intervals based solely on the date of manufacture. UPS stated this requirement imposes unnecessary hardship and higher costs to low-utilization operators. UPS stated that since the issue is one of metal fatigue, a high-utilization operator will subject the same components to multiple times the fatigue exposures as a low-utilization operator over the same period.

UPS also stated that spare intake cowls that have never been in service—and therefore have not seen metal fatigue—are subject to the same calendar-based replacement intervals, and that this severely degrades the value and usability of intake cowls over time. UPS stated a cycle-based compliance time would provide all operators the ability to maximize utilization cycles on the affected intake cowls and defer the high costs of replacement.

We disagree with the commenter's request to provide a cycle-based compliance time because UPS did not provide any data to support a particular cycle-based compliance time. Boeing and Rolls-Royce provided risk analyses and recommended corrective action based on a prescribed calendar-based compliance time. At the time we developed the NPRM (77 FR 69242, October 19, 2012), Boeing and Rolls-Royce stated there were no reliable data to support a risk analysis based on cycle and time usage, e.g., tracking (1) ownership of air intake cowls, (2) which airplane a particular engine air intake cowl had been installed on, (3) which engine a particular air intake cowl had been installed on, and (4) the cycle or time usage on a certain air intake cowl. Thus, Boeing and Rolls-Royce decided to

manage the interim solution as a fleet risk, requiring replacements at a specific time based on the air intake cowl serial number.

However, if any operator has complete data on its air intake cowl usage and substantiating data to justify a cycle-based compliance time, then that operator may apply for approval of an AMOC in accordance with the provisions of paragraph (l) of this AD. We have not changed this final rule in this regard.

Requests for Extension of Compliance Time

FedEx and US Airways requested we extend the proposed compliance time from 12 months to 24 months. Both suggested this revised compliance time be applied for the cowls having the oldest serial numbers (4001 through 4121). US Airways stated that the older cowls are likely to have had a recent shop visit in which damaged components have been detected and repaired. Both stated that neither the manufacturer nor overhaul vendors could provide kits or manpower to accomplish the tasks.

We infer that the commenters are referring to paragraph (h)(1) of the NPRM (77 FR 69242, October 19, 2012). We disagree with the requests to extend the specified compliance time since Rolls-Royce and Bombardier have verified that adequate parts and repair facility capacity are available to support the compliance time of this final rule. Paragraph (l) of this AD provides operators the opportunity to request approval of an AMOC if data are presented that prove an alternative compliance time will provide an acceptable level of safety. We have not changed this final rule in this regard.

Request to Use Supplemental Type Certificate (STC) Completion Date as Initial Accomplishment of Forward Bulkhead Replacement

AAL stated if the operator suspects the Bombardier Aerospace E4X STC was applied to the nose cowl, but the data plate does not reflect it, the operator should contact Bombardier to determine if that particular serial number nose cowl had the

STC applied. AAL stated if the STC was done, then that date can be used as the initial accomplishment of the forward bulkhead replacement.

We disagree with the request. We infer from AAL's statement that AAL incorrectly assumes that Bombardier Aerospace STC ST02102NY ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf)) specifies the replacement of the forward bulkhead assembly. Bombardier Aerospace STC ST02102NY specifies replacement of the metal intake barrel liner in the 535E4 Dyna-Rohr inlet series with a composite intake barrel liner; and also specifies the embodiment of new double thickness insulation blankets, additional intake barrel support brackets, a 50,000 series engine ring, lipskin main diffuser and joints, primary assembly inner rear angles and joints, and a bonding strap, among other associated changes. Bombardier Aerospace STC ST02102NY does not replace the forward bulkhead assembly of the air intake cowl.

However, for operators having sufficient repair records for the replacement of a forward bulkhead assembly, paragraph (l) of this AD provides the opportunity to request approval of an AMOC if data are presented to show that the work accomplished is equivalent to the applicable replacement required by this final rule. We have not changed this final rule in this regard.

Requests to Clarify Compliance Time on Previously Reworked Air Intake Cows

Rolls-Royce and Boeing requested the compliance time specified in paragraph (g) of the NPRM (77 FR 69242, October 19, 2012) be modified by removing the phrase "or within 12 months after the effective date of this AD, whichever is later" and replacing it with a different compliance time.

Boeing stated that the risk assessment used to develop the compliance times did not account for any previous air intake cowl replacement and assumed all air intake cowls would be replaced by a phased compliance time.

Rolls-Royce stated that air intake cowls that previously had parts replaced with the applicable kits would only need to be replaced again within 144 months since the last replacement, or according to the phased compliance times specified in paragraph (h) of the NPRM (77 FR 69242, October 19, 2012), whichever is later. Rolls-Royce stated the compliance times specified in paragraph (g) of the NPRM would penalize the operators that had previously performed the required actions.

We agree with the commenters' requests to revise the specified compliance time. Operators that had previously replaced air intake cowl parts should not be penalized by having to comply with this AD sooner than operators that had not done any replacement. For consistency with the compliance time recommended by the manufacturer, we have removed the phrase "or within 12 months after the effective date of this AD, whichever is later" in paragraph (g) of this final rule and replaced it with the phrase "or according to the applicable time specified in paragraphs (h)(1) through (h)(12) of this AD, whichever is later."

Requests to Allow Repairs Using Original Equipment Manufacturer (OEM) Data

AAL and FedEx requested the NPRM (77 FR 69242, October 19, 2012) contain a statement about future repairs allowing operators the ability to do structural repairs of the forward bulkhead using OEM/owner/operator manuals and specifications using OEM/owner/operator manufactured replacement parts in the event of a premature forward bulkhead failure.

Clarification is needed regarding allowing operators to do future structural repairs of the forward bulkhead. We infer from the comments that the commenters are requesting to perform bulkhead repairs without the need to apply for approval of AMOCs to do those repairs. After accomplishing the actions required by this AD, future maintenance and/or preventive maintenance under 14 CFR part 43 is permitted provided the maintenance does not result in changing the AD-mandated configuration (reference 14 CFR 39.7).

For repairs that do change the AD-mandated configuration, paragraph (l)(3) of this AD allows repair methods to be approved by Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle Aircraft Certification Office (ACO), to make those findings. We have not changed this AD in this regard.

Requests for Correction of Typographical Error

Boeing, FedEx, AAL, and US Airways requested we correct “535EX” cowls to "535E4X" cowls for referring to air intake cowls that have been modified using Bombardier Aerospace STC ST02102NY ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf)) in paragraphs (g), (h), and (i) of the NPRM (77 FR 69242, October 19, 2012). FedEx stated this typo also exists in the Relevant Service Information section of the preamble of the NPRM.

We agree. We have changed paragraphs (g), (g)(1), and (h) of this final rule to refer to “535E4X” cowls. In addition, we removed the introductory phrase that appeared in paragraph (i) of the NPRM (77 FR 69242, October 19, 2012), which included the incorrect cowl reference. However, because the Relevant Service Information section is not restated in the preamble of this final rule, we have not made any change to the preamble of this final rule in that regard.

Requests for a Way to Clearly Identify Air Intake Cowls

AAL and FedEx requested a clear means of identifying E4X air intake cowls on which Bombardier Aerospace STC ST02102NY ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf)) has been applied to the air intake cowl. AAL and FedEx stated, in two cases where Bombardier Aerospace STC ST02102NY was applied to AAL's air intake cowl, the data plate should have been labeled "CSRSCH1001," but it was not. AAL stated that, if the data plate does not reflect it, the operator should contact Bombardier to determine if a particular serial number nose cowl had the STC applied.

We infer from AAL's and FedEx's statements that, if air intake cowls modified by Bombardier Aerospace STC ST02102NY ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf)) are not clearly identified, an operator could inadvertently use the wrong service bulletin. If the data plate does not clearly identify the air intake cowl as an E4X cowl, an operator must determine the correct identification through the airplane's records. We agree with AAL's comment that contacting the holder of the STC might be an appropriate means to determine if the air intake cowl is one that had the STC applied. No change has been made to this final rule in this regard.

Request to Allow Use of Undrilled Parts

AAL requested that the referenced service information be revised to allow the use of undrilled parts in place of certain drilled parts. AAL noted that Bombardier has delivered kits that included the correct part with no pilot holes.

We do not agree to delay issuance of this final rule until revised service information can be approved and released. However, we agree with the commenter's

request to allow use of undrilled parts. After our discussion with the manufacturers, we have determined the following parts are acceptable for use: undrilled attachment angles and attachment angle joints having a part number with a suffix 'U'; undrilled attachment angles, attachment angle joints, diaphragm segments and reinforcing plate that have a trim allowance left, having a part number with a suffix 'S'; and rib stiffeners, with pilot holes and trim allowance left, that have a part number with a suffix 'S.' These separate/loose kit parts used for accomplishment of this final rule must be undrilled or with just the pilot holes present prior to modification. While accomplishing the repair, the final size holes must be drilled and, where applicable, the parts must be trimmed with reference to the removed parts or to the retained existing structure.

We have added a new paragraph (k) to this final rule to allow the use of certain undrilled parts, undrilled parts with trim allowance remaining, or parts with pilot holes and trim allowance remaining that are supplied as separate/loose kit parts, and that have a part number with an 'S' or 'U' suffix in place of the plain part number specified in Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013; and Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014. We have redesignated subsequent paragraphs accordingly.

Requests for Removing Non-Existent Engine Reference

Boeing and Rolls-Royce requested we remove the reference to “-535E4X” engines from paragraph (c) of the NPRM (77 FR 69242, October 19, 2012).

We agree with the commenters' request. There are no engines with a -535E4X designation. Therefore, we have removed the reference to -535E4X engines from paragraph (c) of this final rule.

Request to Reference Air Intake Cowl Part Numbers and Serial Numbers

Boeing requested we revise the NPRM (77 FR 69242, October 19, 2012) to reference the inlet cowl part number and serial number series instead of the Dyna-Rohr standard and the Bombardier standard when referring to the different inlet configurations in paragraphs (g)(2) and (g)(3) of the NPRM. Boeing stated this provides positive identification of the inlet configurations.

We disagree with the request. Proper identification of part and serial numbers will avoid confusion for compliance with this final rule. However, inserting all the specific part and serial numbers in this final rule would duplicate required information that is already contained in the referenced service information. No change has been made to this final rule in this regard.

Request to Revise Certain Terminology

US Airways requested we change the word “replace” to the word “repair” in the identification of affected airplanes in paragraph (g) of the NPRM (77 FR 69242, October 19, 2012). Also, US Airways requested we change the terms “replacement of the air intake cowl,” “replacement,” and “replace,” in multiple locations of the NPRM to “accomplishment of the applicable service bulletin on the inlet cowl.”

US Airways stated that the word “repair” is a more accurate description of the action taken on the inlet cowl to incorporate the referenced service information. US Airways stated that clarifying the wording would aid operators in tracking accomplishment of the NPRM (77 FR 69242, October 19, 2012), and added that the wording change would prevent confusion between requiring the replacement of the forward bulkhead parts versus replacement of the inlet cowl itself.

We partially agree. We disagree with changing the term “replaced” to “repaired” because that change in terminology is inaccurate. We agree that this final rule should be modified because accomplishment of the applicable service information on an air intake

cowl addresses the unsafe condition. We, therefore, have revised paragraphs (g) and (h) of this final rule by adding the words, “replace the air intake cowl with a cowl which has had the forward bulkhead assembly, TAI spray ring assembly, and associated attachment fittings of the air intake cowl replaced using a kit or new parts,” to provide a more accurate description of what is required.

Request for Credit Using Unpublished Service Information

UAL requested credit for work for previous inspections and repairs on affected cowls using Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG242 (no revision or date given). UAL stated this service information recommends an extension of 72 months for the initial repetitive replacement. UAL stated that over fifty percent of its inlets have been repaired or overhauled, and most air intake cowl inlets have had the bulkhead inspected and cracks repaired by replacement of individual structural parts.

We disagree. The only applicable and allowable service information for Model 757 airplanes with Rolls-Royce engines is Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698. Rolls-Royce has informed us that Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG242 was never officially published. We have not reviewed that service information to determine whether it is equivalent to Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698. Thus, we cannot provide credit for work that was accomplished using Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG242. For operators having sufficient repair records for the bulkhead assembly of an air intake cowl, paragraph (l) of this AD provides the opportunity to request approval of an AMOC if data are presented that show that previous work accomplished was equivalent to the work specified by Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698. We have not changed this final rule in this regard.

Request for Credit Through Extension of Compliance Time

FedEx requested credit for any previous inspections or repairs by being allowed an extension of the compliance time proposed in the NPRM (77 FR 69242, October 19, 2012). FedEx stated that all of its inlet cowls had been inspected and any damage to inlet cowl bulkheads had been repaired during regular maintenance intervals.

We disagree with the commenter's request because we do not know if previous repairs or inspections are equivalent to the requirements specified by this final rule. For operators having sufficient repair records for the bulkhead assembly of an air intake cowl, paragraph (l) of this AD provides the opportunity to request approval of an AMOC if data are presented that show that previous work accomplished is equivalent to the work specified in Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698. We have not changed this final rule in this regard.

Request to Revise Service Bulletin Citation

Rolls-Royce requested we revise the NPRM (77 FR 69242, October 19, 2012) to refer to the Rolls-Royce RB.211-71-AG698 publication as "Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698."

We agree with the commenter's request because the service information includes the words "Alert Non-Modification" in the title. We have revised the title of the Rolls-Royce service information throughout this final rule accordingly. We have also changed the reference to the Bombardier RB211-E4-A1003 publication to "Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003," in a similar manner, throughout this final rule.

Requests To Allow the Use of Later Revisions of Service Information

FedEx and AAL requested that the NPRM (77 FR 69242, October 19, 2012) contain a general statement allowing the use of subsequent FAA-approved revisions of the service information as acceptable methods of compliance for the NPRM.

We disagree with the commenters' request. Allowing the use of later revisions of service documents in an AD is not allowed by the Office of the Federal Register regulations for approving materials incorporated by reference. Affected operators may, however, request approval to use a later revision of referenced service information as an AMOC in accordance with the procedures specified in paragraph (l) of this final rule. We have not changed this final rule in this regard.

Requests to Resolve Issues Relating to Warranty Coverage and Published Cost Data

AAL and FedEx requested that warranty considerations be included in the Costs of Compliance of the NPRM (77 FR 69242, October 19, 2012) to remove the economic burden of the NPRM on the operators. AAL, UAL, and FedEx stated that the bulkhead is a flawed design. UAL stated that to replace the flawed bulkhead every 144 months with a bulkhead of the same flawed design is expensive and does not solve the inherent design problem. FedEx and AAL noted that the cost of parts kits purchased from Bombardier is unreasonably high, and that Bombardier charges higher costs for kits if an operator does not use Bombardier's services and facilities to perform the work. FedEx added that the NPRM (77 FR 69242, October 19, 2012) addresses a safety issue and that parts costs should not be governed by business tactics or profits.

We find that no change to the final rule is necessary in this regard. Warranties are not regulated by the FAA. We use manufacturer-quoted parts costs provided in referenced service information in our calculation of the Costs of Compliance. We are not aware of any warranty remedies for the actions required by this final rule.

Statement Regarding the Installation of Winglets

Aviation Partners Boeing (APB) stated that accomplishing the supplemental type certificate STC ST01518SE

([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/48e13cdfbbc32cf4862576a4005d308b/\\$FILE/ST01518SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/48e13cdfbbc32cf4862576a4005d308b/$FILE/ST01518SE.pdf)) does not affect the actions specified in the NPRM (77 FR 64242, October 19, 2012). .

We concur with the commenter. We have redesignated paragraph (c) of the NPRM as (c)(1) and added new paragraph (c)(2) to this final rule to state that the designation of

([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/48e13cdfbbc32cf4862576a4005d308b/\\$FILE/ST01518SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/48e13cdfbbc32cf4862576a4005d308b/$FILE/ST01518SE.pdf)) does not affect the ability to accomplish the actions required by this final rule. Therefore, for airplanes on which STC ST01518SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

Explanation of Change Made to this Final Rule

We have changed paragraph (i) of this final rule to allow credit for actions done before the effective date of this AD using Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, dated October 14, 2011; and Revision 1, dated September 28, 2012.

Since we issued the NPRM (77 FR 69242, October 19, 2012), we have received updated service information from Bombardier. Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014, corrects part number errors contained in previous service information.

We also revised paragraph (i) of this AD to allow credit for actions done previously using Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, dated June 27, 2012; Revision 1, dated August 15, 2012; and

Revision 2, dated December 5, 2012, provided that where this service information specifies part number LJ35479, quantity of two, part numbers LJ50537 and LJ50538, quantity of one each, be used. Also, where this service information specifies part number LJ35482, use part number LJ50535, and where this service information specifies part number LJ35483, use part number LJ50536.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 64242, October 19, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 64242, October 19, 2012).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Interim Action

We consider this AD interim action due to on-going investigation into the nature, cause, and extent of the cracking. If final action is later identified, based on the results of the investigation, we might consider further rulemaking then.

Costs of Compliance

We estimate that this AD affects 332 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace left-side air intake cowl components	Up to 252 work-hours X \$85 per hour = \$21,420 per replacement	Up to \$158,760	Up to \$180,180 per replacement	Up to \$59,819,760
Replace right-side air intake cowl components	Up to 252 work-hours X \$85 per hour = \$21,420 per replacement	Up to \$158,760	Up to \$180,180 per replacement	Up to \$59,819,760

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2014-09-07 The Boeing Company: Amendment 39-17842; Docket No. FAA-2012-1103; Directorate Identifier 2012-NM-131-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

(1) This AD applies to The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category, equipped with Rolls-Royce RB211-535E4, -535E4-B, and -535E4-C engines; or with Rolls-Royce RB211-535E4, -535E4-B, and -535E4-C engines that have air intake cowls that were modified by Bombardier Aerospace Supplemental Type Certificate (STC) ST02102NY ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf)), commonly known as 535E4X cowls.

(2) Installation of supplemental type certificate (STC) ST01518SE ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/48e13cdfbbc32cf4862576a4005d308b/\\$FILE/ST01518SE.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/48e13cdfbbc32cf4862576a4005d308b/$FILE/ST01518SE.pdf)) does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01518SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

(d) Subject

Air Transport Association (ATA) of America Code 71, Powerplant.

(e) Unsafe Condition

This AD was prompted by reports of cracking of the forward bulkhead web, web stiffeners, attachment angles, and thermal anti-ice (TAI) spray ring assemblies of the engine air intake cowl. We are issuing this AD to prevent the failure of air intake cowl components due to cracking, which could result in the air intake cowl separating from the engine and striking critical airplane control surfaces that could result in a loss of airplane control; severe engine damage, and loss of thrust; or large parts striking a person or property on the ground.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Replacement of Air Intake Cowl Forward Bulkhead Assemblies Previously Disassembled

For airplanes on which the air intake cowls were replaced before the effective date of this AD using a kit or parts identified in paragraph (g)(1), (g)(2), or (g)(3) of this AD: Within 144 months since replacement of the air intake cowl, or according to the applicable time specified in paragraphs (h)(1) through (h)(12) of this AD, whichever is later, replace the air intake cowl with a cowl which has had the forward bulkhead assembly, TAI spray ring assembly, and associated attachment fittings of the air intake cowl replaced using a kit or new parts, in accordance with the Accomplishment Instructions of Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014 (for engines with air intake cowls modified by Bombardier Aerospace STC ST02102NY ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf), commonly known as a 535E4X cowls); or Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013 (for engines having Dyna-Rohr or Bombardier standard air intake cowls). Repeat the replacement thereafter at intervals not to exceed 144 months.

(1) RB211-E4A1003KIT, or all the parts listed in Appendix 3 of Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014 (for engines with air intake cowls modified by Bombardier Aerospace STC ST02102NY ([http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf), commonly known as a 535E4X cowls).

(2) RB211-71-AG698-E4KIT, or all the parts listed in Appendix 3 of Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, Revision 2, dated June 20, 2013 (for engines with Dyna-Rohr standard air intake cowls).

(3) RB211-71-AG698-E4BKIT, or all the parts listed in Appendix 4 of Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, Revision 2, dated June 20, 2013 (for engines with Bombardier standard air intake cowls).

(h) Replacement of In-Service Air Intake Cowl Complete Forward Bulkhead Assemblies

For airplanes other than those identified in paragraph (g) of this AD: At the applicable time specified in paragraphs (h)(1) through (h)(12) of this AD, replace the air intake cowl with a cowl which has had the forward bulkhead assembly, TAI spray ring assembly, and associated attachment fittings of the air intake cowl replaced using a kit or new parts, in accordance with the Accomplishment Instructions of Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014 (for engines with air intake cowls modified by Bombardier Aerospace STC ST02102NY

[http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/\\$FILE/ST02102NY.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/256325188c3b1f2f8625705f004dd977/$FILE/ST02102NY.pdf), commonly known as a 535E4X cowls); or Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013 (for engines with Dyna-Rohr or Bombardier standard air intake cowls). Repeat the replacement thereafter at intervals not to exceed 144 months.

(1) For airplanes with air intake cowls having serial numbers 4001 through 4121 inclusive: Replace within 12 months after the effective date of this AD.

(2) For airplanes with air intake cowls having serial numbers 4122 through 4241 inclusive: Replace within 24 months after the effective date of this AD.

(3) For airplanes with air intake cowls having serial numbers 4242 through 4361 inclusive: Replace within 36 months after the effective date of this AD.

(4) For airplanes with air intake cowls having serial numbers 4362 through 4481 inclusive: Replace within 48 months after the effective date of this AD.

(5) For airplanes with air intake cowls having serial numbers 4482 through 4484 inclusive: Replace within 60 months after the effective date of this AD.

(6) For airplanes with air intake cowls having serial numbers 9001 through 9117 inclusive: Replace within 60 months after the effective date of this AD.

(7) For airplanes with air intake cowls having serial numbers 9118 through 9237 inclusive: Replace within 72 months after the effective date of this AD.

(8) For airplanes with air intake cowls having serial numbers 9238 through 9357 inclusive: Replace within 84 months after the effective date of this AD.

(9) For airplanes with air intake cowls having serial numbers 9358 through 9477 inclusive: Replace within 96 months after the effective date of this AD.

(10) For airplanes with air intake cowls having serial numbers 9478 through 9597 inclusive: Replace within 108 months after the effective date of this AD.

(11) For airplanes with air intake cowls having serial numbers 9598 through 9717 inclusive: Replace within 120 months after the effective date of this AD.

(12) For airplanes with air intake cowls having serial numbers 9718 through 9786 inclusive: Replace within 132 months after the effective date of this AD.

(i) Credit for Previous Actions

(1) This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using the applicable service information specified in paragraphs (i)(1)(i) through (i)(1)(v) of this AD, which are not incorporated by reference in this AD.

(i) Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, dated October 14, 2011.

(ii) Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, Revision 1, dated September 28, 2012.

(iii) Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003,

dated June 27, 2012, except as required by paragraph (i)(2) of this AD.

(iv) Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 1, dated August 15, 2012, except as required by paragraph (i)(2) of this AD.

(v) Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 2, dated December 5, 2012, except as required by paragraph (i)(2) of this AD.

(2) Where Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, dated June 27, 2012; Revision 1, dated, August 15, 2012; or Revision 2, dated December 5, 2012; specifies part number LJ35479, quantity of two, use part numbers LJ50537 and LJ50538, quantity of one each. Where Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, dated June 27, 2012; Revision 1, dated, August 15, 2012; or Revision 2, dated December 5, 2012; specifies part number LJ35482, use part number LJ50535; and where the service information specifies part number LJ35483, use part number LJ50536.

(j) No Reporting Requirement

Although Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014; and Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013; specify to submit certain information to the manufacturer, this AD does not include that requirement.

(k) Exception to Service Information Regarding Use of Parts

Where Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013; and Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014; specify part numbers that lack a suffix, this AD allows the use of parts specified in paragraphs (k)(1) through (k)(3) of this AD, but does not allow use of pre-drilled parts when they are sold or

delivered as separate parts and are not part of a forward bulkhead assembly kit. The parts used for accomplishment of this AD must be undrilled, or must only have pilot holes present prior to the repair accomplishment. While accomplishing the repair, the final size holes must be drilled and, where applicable, the parts must be trimmed with reference to the removed parts or to the retained existing structure, in accordance with the Accomplishment Instructions of Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013; and Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014.

(1) Undrilled attachment angles and attachment angle joints having a part number with a suffix 'U.'

(2) Undrilled attachment angles, attachment angle joints, diaphragm segments and reinforcing plate that have a trim allowance left, having a part number with a suffix 'S.'

(3) Rib stiffeners, with pilot holes and trim allowance left, having a part number with a suffix 'S.'

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (m)(1) of this AD. Information may be emailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(m) Related Information

(1) For more information about this AD, contact Kevin Nguyen, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6501; fax: (425) 917-6590; email: kevin.nguyen@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference may be obtained at the addresses specified in paragraphs (n)(3), (n)(4), and (n)(5) of this AD.

(n) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Bombardier Alert Non-Modification Service Bulletin RB211-E4-A1003, Revision 3, dated February 4, 2014.

(ii) Rolls-Royce Alert Non-Modification Service Bulletin RB.211-71-AG698, excluding Appendix 1 and including Appendices 2, 3, and 4, Revision 2, dated June 20, 2013. (The revision level of this document is identified in the transmittal pages only.)

(3) For Rolls-Royce service information identified in this AD, contact Rolls-Royce plc, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; telephone 011 44 1332 242424; fax 011 44 1332 249936; email http://www.rolls-royce.com/contact/civil_team.jsp; Internet <https://www.aeromanager.com>.

(4) For Bombardier service information identified in this AD, contact Short Brothers, Airworthiness, P.O. Box 241, Airport Road, Belfast, BT3 9DZ, Northern Ireland; telephone +44(0)2890-462469; fax +44(0)2890-468444; Internet <http://www.bombardier.com>.

(5) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on April 18, 2014.

Jeffrey E. Duven,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.